

DEPARTMENT OF HEALTH SERVICES

714/744 P STREET
SACRAMENTO, CA 95814

(916) 322-3670

March 15, 1988

Ms. Julie Keller
Safety Officer
Employee Safety Section
Los Angeles Unified School District
P.O. Box 2298
Los Angeles, CA 90051

Dear Ms. Keller:

We have received your letter dated February 17, 1988 requesting written confirmation that "... it is acceptable to dispose of empty refrigerant 22, (chlorodifluoromethane) containers in the municipal trash."

According to federal regulations 40 CFR Section 261.7(b)(2), a container that has held a hazardous waste that is a compressed gas is empty when the pressure in the container approaches atmospheric. If your empty chlorodifluoromethane containers conform to the definition cited above, they are not subject to regulation under the federal Resource Conservation and Recovery Act (RCRA).

California laws and regulations do not have a similar definition for empty containers. However, the California Department of Health Services recognizes the federal definition. Provided the chlorodifluoromethane containers are emptied through the normal course of use (not merely vented to the atmosphere as a means of emptying the containers) and the pressure in the containers approaches atmospheric pressure, your empty chlorodifluoromethane containers may be disposed of as nonhazardous waste.

If you have questions regarding this matter, please contact Cindy Oshita of my staff at (916) 322-3670.

Sincerely,

Stanford C. Lau
Alternative Technology Section
Toxic Substances Control Division

cc: See next page

Ms. Julie Keller

Page 2

March 15, 1988

cc: Angelo Bellomo
Southern California Section
Toxic Substances Control Division
Department of Health Services
107 S. Broadway Room 7011
Los Angeles, CA 90012

James Allen
Northern California Section
Toxic Substances Control Division
Department of Health Services
4250 Power Inn Road
Sacramento, CA 95826

Gerald White
Fresno District Office
Northern California Section
Toxic Substances Control Division
Department of Health Services
5545 E. Shields Avenue
Fresno, CA 93727

Dwight Hoenig
Northern Coast California Section
Toxic Substances Control Division
Department of Health Services
2151 Berkeley Way, Annex 7
Berkeley, CA 94704

SCL:CO:it

CO -

2/24

call RCRA Hotline for
confirmation. Let me know what
they say — Steve. Chlorodifluoromethane
(R-22) not RCRA listed, therefore empty contain-
ers would not be regulated if 261.7(b) is met.
Waste removed using practices commonly used to
empty that kind of container and pressure in contain-
er approaches atmospheric. CO 2425 per RCRA hotline
(Larry Bushe)

Los Angeles Unified School District

Business Services Division

LEONARD M. BRITTON
Superintendent of Schools

ROBERT BOOKER
Chief Business & Financial Officer

DAVID W. KOCH
Division Administrator, Business Services

BONNIE JAMES
Deputy Administrator, Business Services

February 17, 1988

Mr. Stan Lau
Alternative Technologies
Department of Health Services
P. O. Box 94232
Sacramento, CA 94234-7320

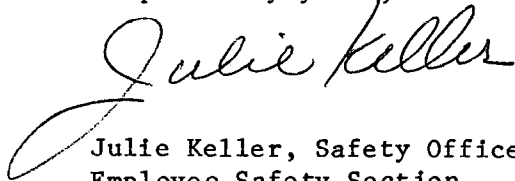
Dear Mr. Lau:

Pursuant to a telephone conversation with Mr. Richard Hume at the Los Angeles section of the Department of Health Services, on February 8, 1988, I understand it is acceptable to dispose of empty Refrigerant 22, (Chlorodifluoromethane) containers in the municipal trash.

The Los Angeles Unified School District will be using this guideline as the method of disposal for those empty containers.

I would appreciate a confirmation memorandum be sent to the Los Angeles Unified School District in written form for recordkeeping purposes. For your review, I have enclosed a copy of the latest Material Safety Data Sheet for chlorodifluoromethane.

Respectfully yours,


Julie Keller, Safety Officer
Employee Safety Section

JK:brr
enclosure



Material Safety Data Sheet

Genium Publishing Corporation

1145 Catalyn Street

Schenectady, NY 12303-1836 USA

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GENIUM PUBLISHING CORP.

No. 307

CHLORODIFLUOROMETHANE

(Revision C)

Issued: August 1979

Revised: February 1986

SECTION 1. MATERIAL IDENTIFICATION

19

MATERIAL NAME: CHLORODIFLUOROMETHANE

DESCRIPTION: Material supplied as a liquified gas under its own vapor pressure in steel cylinders.

OTHER DESIGNATIONS: Monochlorodifluoromethane, Difluorochloromethane, Refrigerant 22, Propellant 22, CHClF₂; CAS # 0075-45-6

TRADE NAMES & MANUFACTURERS: FREON 22 (DuPont); GENETRON 22 (Allied); ISOTRON 22 (Pennwalt); UCON 22 (Union Carbide)

HMIS

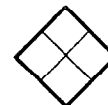
H: 1

F: 0

R: 0

PPE: *

* See Sect. 8



Not Found

R 1

I 1

S 1

K 0

SECTION 2. INGREDIENTS AND HAZARDS

%

HAZARD DATA

CHLORODIFLUOROMETHANE

>99

8-hr TWA: 1000 ppm* or
3500 mg/m³

Rat, Inhalation:

LCLo: 250,000 ppm/4 hrs.

* ACGIH (1985-86) TLV; no OSHA PEL

SECTION 3. PHYSICAL DATA

Boiling Point, 1 atm ... -40°F (-40°C)

Vapor Pressure at 24°C, atm ... ca 10

Vapor Density (Air=1) ... 2.98

Solubility in Water 25°C, 1 atm, wt % ... 0.30

Percent Volatiles ... ca 100

Molecular Weight ... 86.47

Liquid Density @ 20°C, g/cc ... 1.2

Melting Point ... -146°C

Appearance and odor: Colorless, odorless (below 20% in air) gas, which is readily liquified under pressure and/or reduced temperature.

SECTION 4. FIRE AND EXPLOSION DATA

LOWER UPPER

Flash Point and Method

Autoignition Temp.

Flammability Limits In Air

Nonflammable

1170°F

NA

NA

NA

EXTINGUISHING MEDIA: Use whatever is appropriate for surrounding fire.

Chlorodifluoromethane is a nonflammable material. Vapors are heavier than air. High concentrations may tend to accumulate in low areas. Attempt to stop leak if there is no risk. (Liquid likely to destroy skin tissue by freezing.)

Fire fighters should wear self-contained breathing apparatus and fully protective clothing against suffocating vapors and toxic and corrosive decomposition products.

SECTION 5. REACTIVITY DATA

This is a stable gaseous material in closed containers at room temperature under normal storage and handling conditions. It does not undergo hazardous polymerization.

Prevent exposure to alkali or alkaline earth metals such as sodium, potassium, etc. Corrosion can occur when magnesium alloys or aluminum containing more than 2% magnesium is used with fluorocarbon systems in which water may be present.

Thermal-oxidative degradation can produce toxic and corrosive materials such as halogens and carbonyl halides.

SECTION 6. HEALTH HAZARD INFORMATION TLV

High concentrations of chlorodifluoromethane vapors may cause asphyxiation due to dilution of available oxygen in air below levels necessary to sustain life. Symptoms can include lightheadedness, giddiness, disorientation, shortness of breath, and possible cardiac arrhythmias. Vapors may have little or no effect on the eyes, but liquid contact can cause serious eye damage from freezing. Skin contact with liquid can cause frostbite. (This material freezes tissue on contact as liquid rapidly vaporizes.)

FIRST AID: **EYE CONTACT:** Flush thoroughly with running water for 15 minutes (including under eyelids). **SKIN CONTACT:** Remove contaminated clothing. Flush affected area with water. Treat for frostbite if symptoms are present.

INHALATION: Remove to fresh air. Restore and/or support breathing as needed. **INGESTION:** Seek physician (not expected as a hazard). Seek prompt medical assistance for further treatment, observation, and support. **DO NOT USE** epinephrine or similar drugs because they can produce cardiac arrhythmias, including ventricular fibrillation.

Chlorodifluoromethane is not listed as a carcinogen by the NTP, IARC, or OSHA.

SECTION 7. SPILL, LEAK, AND DISPOSAL PROCEDURES

Notify safety personnel of leaks or spills. Remove sources of heat or open flame. Provide adequate ventilation. Cleanup personnel to use self-contained respirator and protective clothing against frostbite. Stop leakage if possible; remove leaking containers to safe area for discharge and allow to evaporate in an area remote from buildings and people.

DISPOSAL: Material can be reclaimed by distillation. Avoid discharge to environment when possible. Return scrap to supplier, if possible. Follow Federal, state, and local regulations.

Aquatic Toxicity Rating: TLm 96:>1000 ppm

SECTION 8. SPECIAL PROTECTION INFORMATION

Provide adequate mechanical ventilation to keep vapors below the TLV level. Supply ventilation for sumps and low-lying areas where the dense vapors of this material may collect. Local exhaust should be used where large amounts are released. Use approved self-contained or air-supplied breathing apparatus and lifelines for emergencies. Use chemical safety goggles and/or face shield to prevent liquid contact with eyes where splashing is possible. Wear neoprene or lined butyl gloves and clothing appropriate for the work situation to minimize skin contact with liquid.

Eyewash stations and safety showers should be readily accessible near use areas.

Follow general safety requirements for compressed gases.

Vaporization of excessive amounts can displace oxygen necessary for breathing and may cause suffocation when used in confined spaces or areas without ventilation.

SECTION 9. SPECIAL PRECAUTIONS AND COMMENTS

Store in closed, steel, pressurized cylinders in a cool (below 125°F), dry, well-ventilated area away from open flame and heat sources. Arc-producing equipment or other high-temperature equipment should not be used in a fluorinated hydrocarbon atmosphere. Protect containers from physical damage. High-density vapors may displace air and present an asphyxiation hazard. Concentrations well below the TLV level can damage space heaters when drawn into the combustion chamber. Heater should have independent air supply.

Prevent skin and eye contact with liquid. Avoid inhalation of vapors. Thermal decomposition products can form halogen acids that have very sharp stringent effects and can be detected by odor. Such odor is a hazard warning; when detected, immediately evacuate the area and ventilate.

DOT Classification: Nonflammable Gas

UN1018

Label: Nonflammable Gas

Data Source(s) Code: 1-4, 6-7, 17, 26, 34, 47, 51, 82, 84, CK

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Approvals

Indust. Hygiene/Safety

Medical Review

J. O. Acciocco, 6/86

JW 6/86

[Signature] 7/86